

IV. AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) An antenna device of an interrogator having a resonance frequency of a predetermined value which constitutes an automatic identification system by exchanging information with an IC tag attached to an object to be identified by electromagnetic coupling, comprising:

an antenna element; and

a capacitor which is connected in series to said antenna element and having a variable capacitance to maintain ~~a predetermined~~ the resonance frequency of the antenna device at the predetermined value.

2. (ORIGINAL) The antenna device according to claim 1, wherein said capacitance of said capacitor is made variable by switching a switch.

3. (ORIGINAL) An antenna device of an interrogator having a resonance frequency of a predetermined value which constitutes an automatic identification system by exchanging information with an IC tag attached to an object to be identified by electromagnetic coupling, comprising:

an antenna coil having taps which are switched from one to another to maintain ~~a predetermined~~ the resonance frequency of the antenna device at the predetermined value.

4. (CURRENTLY AMENDED) An antenna device of an interrogator having a resonance frequency of a predetermined value which constitutes an automatic identification system by exchanging information with an IC tag attached to an object to be identified by electromagnetic coupling, comprising:

an antenna coil; and

an inductor which is connected in series to said antenna coil and having taps which are switched from one to another to maintain ~~a predetermined~~ the resonance frequency of the antenna device at the predetermined value.

5. (CURRENTLY AMENDED) The antenna device according to claim 3, wherein said taps are converted by switching a switch.

6. (PREVIOUSLY PRESENTED) The antenna device according to

claim 2, wherein said switch is a semiconductor switch which is controlled by a control circuit for detecting a deviation of said resonance frequency and controlling said resonance frequency to a predetermined frequency.

7. (CURRENTLY AMENDED) An antenna device of an interrogator having a resonance frequency of a predetermined value which constitutes an automatic identification system by exchanging information with an IC tag attached to an object to be identified by electromagnetic coupling, comprising:

an antenna coil; and

a variable inductor, connected in series to said antenna coil, for ~~maintaining a predetermined~~ the resonance frequency of the antenna device at the predetermined value.

8. (ORIGINAL) The antenna device according to claim 7, wherein said variable inductor is controlled by a control circuit for detecting a deviation of resonance frequency and controlling resonance frequency to a predetermined frequency.

9. (ORIGINAL) The antenna device according to claim 1, wherein a predetermined communication distance is ensured by varying a drive voltage of said antenna device.

10. (PREVIOUSLY PRESENTED) The antenna device according to claim 5, wherein said switch is a semiconductor switch which is controlled by a control circuit for detecting a deviation of said resonance frequency and controlling said resonance frequency to a predetermined frequency.

11. (PREVIOUSLY PRESENTED) The antenna device according to claim 3, wherein a predetermined communication distance is ensured by varying a drive voltage of said antenna device.

12. (NEW) The antenna device according to claim 1, further comprising a control circuit for controlling an amount of capacitance in order to maintain the

resonance frequency of the antenna device at the predetermined value.

13. (NEW) The antenna device according to claim 4, further comprising a control circuit for controlling an amount of inductance of the inductor in order to maintain the resonance frequency of the antenna device at the predetermined value.

14. (NEW) The antenna device according to claim 7, further comprising a control circuit for controlling an amount of inductance of the variable inductor in order to maintain the resonance frequency of the antenna device at the predetermined value.